



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/970,351	10/03/2001	Carey Ritchey	49581/P030US/10104106	1535
29053	7590	06/07/2004	EXAMINER	
DALLAS OFFICE OF FULBRIGHT & JAWORSKI L.L.P. 2200 ROSS AVENUE SUITE 2800 DALLAS, TX 75201-2784			JONES, STEPHEN E	
		ART UNIT	PAPER NUMBER	2817

DATE MAILED: 06/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/970,351 Examiner Stephen E. Jones	RITCHIEY ET AL. Art Unit 2817

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 13 April 2004.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-22 and 24-53 is/are pending in the application.  
 4a) Of the above claim(s) 4,5,16-21,29-36,47 and 48 is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-3,6-15,22,24-28,37-44,46 and 49-53 is/are rejected.  
 7) Claim(s) 45 is/are objected to.  
 8) Claim(s) 1-22 and 24-53 are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | Paper No(s)/Mail Date. _____ .  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/2/04</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|   | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/13/04 has been entered.
  
2. The indicated allowability (or allowable subject matter) of claims 8-15, 26-28, 37-44, and 46 is withdrawn in view of the newly discovered reference(s) to Terai (JP 06152301A). Rejections based on the newly cited reference(s) follow.

***Election/Restrictions***

3. Claims 4-5, 16-21, 29-36, and 47-48 remain withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 7.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Art Unit: 2817

5. Claim 25 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The description of a common anode node of the signal path diodes coupled to the first control signal of claim 25 in combination with at least one diode in shunt with an anode coupled to the first control signal (as in Claim 22) is not disclosed in the original disclosure and drawings. Claim 22 requires that the two shunt diodes be connected at their anodes to respective first and second control inputs such as shown in Fig. 2A, and a third control input is connected to the anodes of the signal path diodes.

Any arguments regarding this “new matter” rejection should include the particular location in the original drawings or specification where these limitations can be found.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-3, 6-9, 11-14, 26-28, 37-39, 46, 49-51, and 53 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Terai (JP 06152301A).

Terai (Fig. 1) teaches an attenuator including the same structure as in the present claims. Also, inherently the Terai circuit would function equivalently since all of the particular claimed elements having particular functions are the same as Terai.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 40-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Terai (JP 06152301A).

Terai teaches an attenuator as described above. However, Terai does not explicitly teach that the dynamic attenuation is at least 30 dB (Claim 40) or 35 dB (Claim

Art Unit: 2817

41) of the dynamic range, or that the impedance of the input node is approximately 75 ohms (Claim 42).

It would have been considered obvious to one of ordinary skill in the art to have selected the dynamic attenuation to have been at least 30/35 dB of the dynamic range, because it would have been considered a mere optimization of the circuit to obtain pre-selected attenuation characteristics.

Also, it would have been considered obvious to one of ordinary skill in the art to have the signal input node impedance to be approximately 75 ohms, because the impedance is based on the desired use, such as cable TV which is a standard RF impedance where it is well-known to have 75 ohm lines, thereby suggesting the obviousness of such a modification.

**11.** Claims 10, 22, 24, 43, 44, and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Terai (JP 06152301A) in view of Russell (cited by applicant).

Terai teaches an attenuator as described above. However, Terai does not explicitly teach that the shunt diodes each have a separate control circuit (such as in Fig. 2A of the present invention).

Russell (e.g. Fig. 9) teaches using separate control circuits for each shunt diode of an attenuator.

It would have been considered obvious to one of ordinary skill in the art to have modified the Terai circuit to have had individual control circuits for each shunt such as taught by Russell, because having additional controls would have provided the

Art Unit: 2817

advantageous benefit of more precise control capability of the entire attenuator, thereby suggesting the obviousness of such a modification.

12. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Terai (JP 06152301A) in view of Marconi.

Terai teaches an attenuator as described above. However, Terai does not explicitly teach that the control signals are provided by a linearizer circuit.

Marconi teaches using a linearizer circuit for controlling an attenuator (e.g. see Col. 5, lines 60-62).

It would have been considered obvious to one of ordinary skill in the art to have provided the control in the Terai circuit by means of a linearizer circuit such as taught by Marconi, because it would have provided the advantageous benefit of preventing unwanted non-linear characteristics at the control inputs of the attenuator, thereby suggesting the obviousness of such a modification.

#### ***Allowable Subject Matter***

13. Claim 45 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

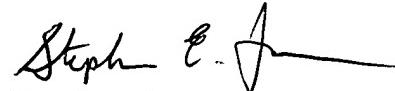
#### ***Response to Arguments***

14. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen E. Jones whose telephone number is 571-272-1762. The examiner can normally be reached on Monday through Friday from 8 AM to 4 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Pascal can be reached on 571-272-1769. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Stephen Jones  
Patent Examiner  
Art Unit 2817

SEJ